IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Randall E. Messick	Examiner: Raheem Hoffler
Serial No.:	10/825,207	Group Art Unit: 2165
Filed:	April 16, 2004	Docket No.: 100203807-1
Title:	Message-Based Method and System for Managing a Storage Area Network	

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is filed in response to the Final Office Action mailed March 21, 2007, the Notice of Appeal mailed June 21, 2007, and the Notification of Non-Compliant Appeal Brief mailed September 4, 2007.

AUTHORIZATION TO DEBIT ACCOUNT

It is believed that no extensions of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's deposit account no. 08-2025.

I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the State of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly-owned affiliate of Hewlett-Packard Company, a Delaware Corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences known to appellant, the appellant's legal representative, or assignee that will directly affect or be directly affected by or have a bearing on the Appeal Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1 – 32 stand finally rejected. The rejection of claims 1 – 32 is appealed.

IV. STATUS OF AMENDMENTS

No amendments were made after receipt of the Final Office Action. All amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The following provides a concise explanation of the subject matter defined in each of the claims involved in the appeal, referring to the specification by page and line number and to the drawings by reference characters, as required by 37 C.F.R. § 41.37(c)(1)(v). Each element of the claims is identified by a corresponding reference to the specification and drawings where applicable. Note that the citation to passages in the specification and drawings for each claim element does not imply that the limitations from the specification and drawings should be read into the corresponding claim element or that these are the sole sources in the specification supporting the claim features.

As explained in Applicant's Background section, in current computer systems, SAN management functions may be under control of a storage management application. Such a storage management application requires frequent human user interaction. Extra administrators must be available to react to problems that may arise during operation of the computer system, and in particular, during operation of the computer system's storage sub-system. If these administrators are not available or if the administrators are not empowered to resolve storage and network problems, delays in reconfiguring the SAN for optimum performance may occur. For example, if a database exceeds its allocated storage capacity, an administrator must be informed immediately or there is a risk that an application will "crash." (See Applicant's specification in Background at p. 1, lines 10-18).

As stated in Applicant's Summary section, one exemplary embodiment provides a method for managing a storage area network (SAN). The method includes the steps of receiving an alert related to a state of a device coupled to the network and parsing the alert to identify the state of the device. The parsing step includes determining a problem category and determining action options by consulting an action rules database. The method further includes identifying action required in response to the identified state of the device and identifying a notification message. The notification message provides information related to the state of the device. (See Applicant's specification in Summary at p. 1, lines 25-31).

Claim 1

A message-based method for managing a storage area network (SAN) (FIG. 1A, #20/30), comprising:

receiving an alert related to a state of a device (FIG. 1A, #50/60) coupled to the SAN (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17; FIG. 4B, #510; p. 9, lines 20 - 23);

parsing the alert to identify the state of the device (p. 8, lines 3 – 12: FIG. 4B, #525; p. 9, lines 32-34), comprising:

determining a problem category (p. 8, line 18 – p. 9, line 5; FIG. 4B, #535; p. 10, lines 5 - 22), and

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determining action options, comprising consulting an action rules database (p. 5, lines 24-31; p. 8, line 18 – p. 9, line 5; FIG. 4B, #540; p. 10, lines 8 – 22);

identifying an action required to correct a problem associated with the alert in response to the identified state of the device (p. 8, line 18 – p. 9, line 5; FIG. 4C, #550; p. 10, lines 23 – 31);

identifying a notification message, wherein the notification message provides information related to the state of the device (p. 8, line 18 – p. 9, line 5; FIG. 4C, #570; p. 11, lines 7 – 21); and

performing one of (1) automatically performing the action to correct the problem without approval from an operator of the SAN and (2) notifying the operator to perform the action to correct the problem (FIG. 4C, #555-580; p. 11, lines 7 – 21).

Claim 9

A method for managing a storage area network (SAN) (FIG. 1A, #20/30), wherein a message processor (FIG. 1C, #300) receives alerts from a management server (FIG. 1A, #100) and sends notification messages to SAN operators, the method, comprising:

monitoring states of devices (FIG. 1A, #50/60) coupled to the SAN (p. 5, lines 6 – 23);

receiving an alert when a state of a device indicates a problem (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17; FIG. 4B, #510; p. 9, lines 20 - 23);

determining if the alert is understood (FIG. 4B, #515), wherein if the alert is not understood, the message processor sends a return message to the management server (FIG. 4B, #520; p. 9, lines 20 - 31);

identifying a device subject to the alert (FIG. 4B, #525; p. 9, lines 32 - 34);

identifying a problem as indicated by the alert (FIG. 4B, #535; p. 10, lines 5 – 22);

identifying action steps for correcting the problem (FIG. 4C, #550; p. 10, lines 23 – 31);

automatically performing the action steps to correct the problem when an operator is not required to make a decision for correcting the problem (FIG. 4C, #555/560; p. 10, line 29 – p. 11, line 6); and

sending the action steps to correct the problem to the operator when the operator is required to make a decision for correcting the problem (FIG. 4C, #565; p. 11, lines 7 – 21).

Claim 13

A message-based system for managing a storage area network (SAN) (FIG. 1A, #20/30), comprising:

a management server (FIG. 1A, #100) that monitors states of devices (FIG. 1A, #50/60) coupled to the SAN and sends alert messages based on the states (p. 5, lines 6 – 23);

a message processor (FIG. 1C, #300) that receives the alert messages and sends notification messages (p. 7, line 23 – p. 8, line 2), the message processor comprising:

a receiver (FIG. 2, #320) that receives the alert messages (p. 8, lines 3 – 7),

a parser (FIG. 2, #330) that analyzes the received alert messages (p. 8, lines 8 – 12),

a formatter/addresser (FIG. 2, #340) that formats and addresses the notification messages (p. 8, lines 13 – 15), and

a transmitter (FIG. 2, #350) that sends the notification messages to messaging devices (p. 8, lines 16 – 17); and

an action rules database (FIG. 2, #310) that specifies possible corrective actions for correcting a problem associated with the alert, wherein the parser consults the database to select one or more of the corrective actions (p. 6, lines 6 – 10; p. 7, line 23 – p. 8, line 2; p. 10, lines 8 – 22).

Claim 21

A compute readable medium having instructions for causing a computer to execute a method (p. 12, line 32 – p. 13, line 10), comprising:

receiving an alert related to a state of a device (FIG. 1A, #50/60) coupled to a storage area network (SAN) (FIG. 1A, #20/30; p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17; FIG. 4B, #510; p. 9, lines 20 - 23);

parsing the alert to identify the state of the device (p. 9, lines 6 – 19; FIG. 4B, #525; p. 9, lines 32 - 34), comprising:

determining a problem category (FIG. 4B, #535; p. 10, lines 5 – 22), and

determining action options (FIG. 4C, #550; p. 10, lines 23 – 31), comprising consulting an action rules database (FIG. 2, #310; p. 6, lines 6 – 10; p. 7, line 23 – p. 8, line 2; p. 10, lines 8 – 22);

identifying an action required to correct a problem associated with the alert in response to the identified state of the device (FIG. 4C, #550; p. 10, lines 23 – 31);

identifying a notification message, wherein the notification message provides information related to the state of the device (FIG. 4C, #570; p. 11, lines 13 – 21); and

performing one of (1) automatically performing the action to correct the problem without approval from an operator of the SAN and (2) notifying the operator to perform the action to correct the problem (FIG. 4C, #555-580; p. 11, lines 7 – 21).

Claim 28

A message-based system for managing a storage area network (SAN) (FIG. 1A, #20/30), comprising:

means (FIG. 1A, #100) for monitoring states of devices (FIG. 1A, #50/60) coupled to the SAN (p. 4, line 28 – p. 5, line 5);

means (FIG. 1C, #300) for sending alert messages based on the states (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17);

means (FIG. 1C, #300) for receiving the alert messages and sending notification messages (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17);

means (FIG. 1C, #300) for identifying actions to correct problems associated with the alert messages (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17);

means (FIG. 1C, #300) for automatically performing the actions to correct the problems when an operator is not required to make a decision for correcting the problems (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17); and

means (FIG. 1C, #300) for sending the actions to correct the problems to the operator when the operator is required to make a decision for correcting the problems (p. 5, line 6 – p. 6, line 5; p. 7, line 23 – p. 8, line 17).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 13 and 28 are rejected under 35 USC § 102(e) as being anticipated by US publication number 20050076281 (Kojima).

Claims 1-12, 14-27, and 29-32 are rejected under 35 USC § 103(a) as being unpatentable over Kojima in view of USPN 7,095,321 (Primm).

VII. ARGUMENT

The rejection of claims 1 – 32 is improper, and Applicants respectfully request reversal of these rejections.

The claims do not stand or fall together. Instead, Applicants present separate arguments for various claims. Each of these arguments is separately argued below and presented with separate headings and sub-heading as required by 37 C.F.R. § 41.37(c)(1)(vii).

Claim Rejections: 35 USC § 102(e)

Claims 13 and 28 are rejected under 35 USC § 102(e) as being anticipated by US publication number 20050076281 (Kojima). These rejections are traversed.

A proper rejection of a claim under 35 U.S.C. §102 requires that a single prior art reference disclose each element of the claim. See MPEP § 2131, also, *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983). Since Kojima does teach each element in claims 13 and 28, these claims are allowable over Kojima.

Claim 13

As one example, claim 13 recites that a message processor receives alert messages based on the states of devices coupled to a SAN. The Examiner **admits** that Kojima does not teach such a recitation: "Kojima et al failed to explicitly recite the limitations of receiving an alert related to a state of a device coupled to the SAN" (see final OA at p. 4). Although the Examiner makes this admission in connection with independent claim 1, this admission also applies to claim 13 since claim 13 also recites receiving an alert to a state of a device coupled to a SAN.

Based on the Examiner's own admission, claim 13 is not anticipated by Kojima. Applicant respectfully requests reversal of this rejection.

As another example, claim 13 recites a message-based system for managing a storage area network (SAN) that includes a management server that monitors states of devices coupled to the SAN. Kojima is not directed to managing a SAN and monitoring

states of states of devices in a SAN. **Kojima is not directed to a SAN at all.** The term storage area network (SAN) has a very distinct meaning to one of ordinary skill in the art. Applicant's specification uses the term SAN in its plain meaning (see Applicant's specification at p. 3, lines 17 – 33). Nowhere does Kojima discuss SANs. By contrast, Kojima discusses notifying an administrator in a local area network (LAN) that includes printers, user terminals, and a mail server. LANs and SANs are very different networks.

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed (see *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985)). For at least these reasons, claim 13 is allowable over Kojima.

As a third example, claim 13 recites "an action rules database that specifies possible corrective actions for correcting a problem associated with the alert, wherein the parser consults the database to select one or more of the corrective actions." Kojima does not teach these elements.

The Examiner argues that these recitations are taught in Kojima at column 6, line 57 – column 7, line 3; column 12, lines 34 – 41, 51-54; and column 9, line 58 – column 10, line 65. Applicant respectfully disagrees and addresses each of these cited sections in Kojima.

Column 6, line 57 – column 7, line 3 teaches that an administrator can elect to receive an error message. This section also states that an error type area includes a condition type area. Nowhere does this section of Kojima state specifying possible corrective actions for correction a problem. Again, Kojima does not specify corrective actions. Kojima only specifies an error type. Further, the claim recites that the parser selects one or more of the corrective actions. Kojima never specifies a corrective action. Nowhere does a parser select a corrective action. Again Kojima notifies an administrator of an error type, but does not notify the administrator of corrective actions for the error type.

Column 12, lines 34 – 41, 51-54 teaches preparing notification information based on printer status and then transmitting (example, emailing) this printer information to an administrator. Nowhere does this section of Kojima state specifying possible corrective actions for correction a problem. Again, Kojima does not specify corrective actions.

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Kojima merely states "printer status information setting screen 100 (FIG. 5) and on printer status information of the printer 2 indicating a number of total print pages and the like" (see Kojima at paragraph [0083]). Further, the claim recites that the parser selects one or more of the corrective actions. Kojima never specifies a corrective action. Nowhere does a parser select a corrective action. Again Kojima notifies an administrator of a printer status, but does not notify the administrator of corrective actions for the error type.

Column 9, line 58 – column 10, line 65 teaches different type of printer errors (example, see FIG. 12) such as cover open, jam, or toner low. Nowhere does this section of Kojima state specifying possible corrective actions for correction a problem. Again, Kojima does not specify corrective actions. Kojima merely states error types for printers. Further, the claim recites that the parser selects one or more of the corrective actions. Kojima never specifies a corrective action. Nowhere does a parser select a corrective action. Again Kojima notifies an administrator of a printer errors (example, jam, cover open, or low toner), but does not notify the administrator of corrective actions for the error type.

For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference (see *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990)). For at least these reasons, claim 13 is allowable over Kojima.

Claim 28

First, the Examiner has failed to establish a prima facie case to reject each of the elements of claim 28. The Examiner has not addressed each element in claim 28 at all. Instead, the Examiner states:

> Claim 28 differs from Claim 13 in that claim 28 is a system whereas claim 13 is a system claim. Thus, claim 28 is analyzed as previously discussed with respect to claim 13 above. (See Final OA at p. 3).

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This argument is flawed because claim 28 recites elements that are not recited in claim 13. In other words, claims 13 and 28 recite different elements. For instance, claim 28 recites "means for automatically performing the actions to correct the problems ...." This element does not exist in claim 13. **The Examiner never addresses this claim element.** Therefore, a prima facie case for rejecting claim 28 does not exist.

Further, claim 28 recites "means" elements, whereas claim 13 does not recite means elements. The law provides different analysis for analyzing and rejecting means claims versus non-means claims. The Examiner never rejects the means elements of claim 28 or even acknowledges such means elements. Therefore, a prima facie case for rejecting claim 28 does not exist.

As another example, claim 28 recites means for monitoring states of devices coupled to a storage area network (SAN). Kojima is not directed to managing a SAN and monitoring states of states of devices in a SAN. **Kojima is not directed to a SAN at all.** The term storage area network (SAN) has a very distinct meaning to one of ordinary skill in the art. Applicant's specification uses the term SAN in its plain meaning (see Applicant's specification at p. 3, lines 17 – 33). Nowhere does Kojima discuss SANs. By contrast, Kojima discusses notifying an administrator in a local area network (LAN) that includes printers, user terminals, and a mail server. LANs and SANs are very different networks.

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed (see *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985)). For at least these reasons, claim 28 is allowable over Kojima.

As yet another example, claim 28 recites a means for receiving alert messages based on states of devices. The Examiner **admits** that Kojima does not teach such a recitation: "Kojima et al failed to explicitly recite the limitations of receiving an alert related to a state of a device coupled to the SAN" (see final OA at p. 4). Although the Examiner makes this admission in connection with independent claim 1, this admission also applies to claim 28 since claim 28 also recites receiving an alert to a state of a device coupled to a SAN.

Based on the Examiner's own admission, claim 28 is not anticipated by Kojima. Applicant respectfully requests reversal of this rejection.

As yet another example, claim 28 recites means for identifying actions to correct problems associated with the alert messages. As noted, Kojima notifies an administrator of errors occurring in printer, but never notifies an administrator of actions to correct the errors.

For at least these reasons, claim 28 is not anticipated by Kojima.

As yet another example, claim 28 recites "means for automatically performing the actions to correct the problems when an operator is not required to make a decision for correcting the problems." The Examiner does not eve address this element. Nowhere does Kojima teach or even suggest a means that automatically performs actions to correct problems when an operator is not required to make a decision for correcting a problem.

For at least these reasons, claim 28 is not anticipated by Kojima.

Claim Rejections: 35 USC § 103

Claims 1-12, 14-27, and 29-32 are rejected under 35 USC § 103(a) as being unpatentable over Kojima in view of USPN 7,095,321 (Primm). These rejections are traversed.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. *See* M.P.E.P. § 2143. For at least the following reasons, Applicant asserts that the rejection does not satisfy these criteria.

<u>Claim 1</u>

Claim 1 recites "identifying an action required to correct a problem associated with the alert in response to the identified state of the device." Kojima in view of Primm does not teach or suggest this element. The Examiner argues that this element is shown at column 9, line 58 – column 10, line 65. Applicant respectfully disagrees.

Column 9, line 58 – column 10, line 65 teaches different type of printer errors (example, see FIG. 12) such as cover open, jam, or toner low. Nowhere does this section of Kojima state identifying an action to correct a problem associated with an alert. Again, Kojima does not specify corrective actions for alerts. Kojima merely states error types for printers. Kojima notifies an administrator of a printer errors (example, jam, cover open, or low toner), but does not notify the administrator of corrective actions for the error type.

For at least these reasons, claim 1 is allowable over Kojima in view of Primm.

As another example, claim 1 recites "automatically performing the action to correct the problem without approval from an operator of the SAN." Kojima in view of Primm does not teach or suggest this element.

The Examiner argues that these recitations are taught in Kojima at column 6, line 57 – column 7, line 3; and column 12, lines 34 – 41, 51-54 (see Final OA at p. 16). Applicant respectfully disagrees and addresses each of these cited sections in Kojima.

Column 6, line 57 – column 7, line 3 teaches that an administrator can elect to receive an error message. This section also states that an error type area includes a condition type area. Nowhere does this section of Kojima teach or suggest automatically performing a corrective action to correct the problem without approval from the operator. Again, Kojima does not specify corrective actions. Kojima only specifies an error type, not corrective actions. Further, the claim recites automatically correcting the action without approval from the administrator. In Kojima, the administrator is notified of an error, but Kojima never suggests that the system then automatically corrects the error without approval from the administrator.

Column 12, lines 34 – 41, 51-54 teaches preparing notification information based on printer status and then transmitting (example, emailing) this printer information to an administrator. Nowhere does this section of Kojima teach or suggest automatically performing a corrective action to correct the problem without approval from the operator. Again, Kojima does not specify corrective actions. Kojima merely states "printer status information setting screen 100 (FIG. 5) and on printer status information of the printer 2 indicating a number of total print pages and the like" (see Kojima at paragraph [0083]). Further, the claim recites automatically correcting the action without approval from the

administrator. In Kojima, the administrator is notified of an error, but Kojima never suggests that the system then automatically corrects the error without approval from the administrator.

For at least these reasons, claim 1 is allowable over Kojima in view of Primm.

As yet another example, claim 1 recites receiving an alert related to a state of a device coupled to a storage area network (SAN). The Examiner argues that Kojima teaches this element in a SAN. Applicant respectfully disagrees.

Kojima is not directed to managing a SAN and receiving alerts relates to states of devices in a SAN. **Kojima is not directed to a SAN at all.** The term storage area network (SAN) has a very distinct meaning to one of ordinary skill in the art. Applicant's specification uses the term SAN in its plain meaning (see Applicant's specification at p. 3, lines 17 – 33). Nowhere does Kojima discuss SANs. By contrast, Kojima discusses notifying an administrator in a local area network (LAN) that includes printers, user terminals, and a mail server. LANs and SANs are very different networks.

For at least these reasons, claim 1 is allowable over Kojima in view of Primm.

Response to Examiner Citations to Primm

The Examiner cites several sections of Primm. Applicant responds as follows: In Primm, when an alert occurs, an email or other notification is sent to a user. Primm never teaches that the system identifies an action required to correct the problem. Further, Primm never teaches that the system automatically performs the action to correct the problem. As taught in Primm, the action handler provides email notification, audio output telephonic output, or pager output (see col. 9, lines 58-63 and discussion at column 10).

Primm does discuss determining what alert actions should be applied (example, see 12: 34-36). These alert action, however, are not actions "required to correct the problem." Instead, the alert actions in Primm merely notify the user, not provide the user with an action to correct the alert.

Claim 9

Claim 9 recites "identifying action steps for correcting the problem." Kojima in view of Primm does not teach or suggest this element. The Examiner argues that this element is shown in Primm at column 8, lines 28-33 and column 12, lines 20-24, 29-32. Applicant respectfully disagrees.

Column 8, lines 28-33 teaches creating an alert or error object. Primm, however, never suggests identifying action steps to correct these alerts or error objects.

Colum 12, lines 20-24, 29-32 teach sending a user an alert of an error. Primm, however, never suggests identifying action steps to correct these alerts.

For at least these reasons, claim 9 is allowable over Kojima in view of Primm.

As another example, claim 9 recites "automatically performing the action steps to correct the problem when an operator is not required to make a decision for correcting the problem." Kojima in view of Primm does not teach or suggest this element.

In Primm, when an alert occurs, an email or other notification is sent to a user. Primm never teaches that the system identifies an action required to correct the problem. Further, Primm never teaches that the system automatically performs the action to correct the problem. As taught in Primm, the action handler provides email notification, audio output telephonic output, or pager output (see col. 9, lines 58-63 and discussion at column 10).

Primm does discuss determining what alert actions should be applied (example, see 12: 34-36). These alert action, however, are not actions "required to correct the problem." Instead, the alert actions in Primm merely notify the user, not provide the user with an action to correct the alert.

For at least these reasons, claim 9 is allowable over Kojima in view of Primm.

As yet another example, claim 9 recites managing a storage area network (SAN) and monitoring states of devices coupled to a SAN. The Examiner argues that these elements are taught in Kojima. Applicant respectfully disagrees.

Kojima is not directed to managing a SAN and monitoring states of devices in a SAN. **Kojima is not directed to a SAN at all.** The term storage area network (SAN) has a very distinct meaning to one of ordinary skill in the art. Applicant's specification uses the term SAN in its plain meaning (see Applicant's specification at p. 3, lines 17 – 33).

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Nowhere does Kojima discuss SANs. By contrast, Kojima discusses notifying an administrator in a local area network (LAN) that includes printers, user terminals, and a mail server. LANs and SANs are very different networks.

For at least these reasons, claim 9 is allowable over Kojima in view of Primm.

Claim 21

Claim 21 is allowable for at least the reasons provided in connection with claim 1.

Dependent Claims

The dependent claims are allowable for at least the reasons provided in connection with respect to the independent claims.

CONCLUSION

In view of the above, Applicants respectfully request the Board of Appeals to reverse the Examiner's rejection of all pending claims.

Any inquiry regarding this Amendment and Response should be directed to Philip S. Lyren at Telephone No. 832-236-5529. In addition, all correspondence should continue to be directed to the following address:

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Respectfully submitted,

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VIII. Claims Appendix

1. (previously presented) A message-based method for managing a storage area network (SAN), comprising:

    receiving an alert related to a state of a device coupled to the SAN;

    parsing the alert to identify the state of the device, comprising:

        determining a problem category, and

        determining action options, comprising consulting an action rules database;

    identifying an action required to correct a problem associated with the alert in response to the identified state of the device;

    identifying a notification message, wherein the notification message provides information related to the state of the device; and

    performing one of (1) automatically performing the action to correct the problem without approval from an operator of the SAN and (2) notifying the operator to perform the action to correct the problem.

2. (previously presented) The method of claim 1, further comprising identifying the operator of the SAN to receive the notification message.

3. (original) The method of claim 2, further comprising sending the notification message to the operator.

4. (original) The method of claim 3, further comprising:

    waiting on a response message from the operator, wherein the response message directs performance of one or more action steps; and

    directing execution of the action steps.

5. (original) The method of claim 4, wherein the information in the notification message includes one or more suggested action steps for execution.

6. (previously presented) The method of claim 1, further comprising providing the operator with specific actions required to correct the problem.

7. (original) The method of claim 1, wherein the information includes a report of automatic action steps completed.

8. (original) The method of claim 1, wherein the notification message is one of an e-mail message, a voice message and a voice-to-text message.

9. (previously presented) A method for managing a storage area network (SAN), wherein a message processor receives alerts from a management server and sends notification messages to SAN operators, the method, comprising:

      monitoring states of devices coupled to the SAN;

      receiving an alert when a state of a device indicates a problem;

      determining if the alert is understood, wherein if the alert is not understood, the message processor sends a return message to the management server;

      identifying a device subject to the alert;

      identifying a problem as indicated by the alert;

      identifying action steps for correcting the problem;

      automatically performing the action steps to correct the problem when an operator is not required to make a decision for correcting the problem; and

      sending the action steps to correct the problem to the operator when the operator is required to make a decision for correcting the problem.

10. (previously presented) The method of claim 9, further comprising determining if the action steps for correcting the problem are required to be one of (1) performed by a server and (2) performed by the operator.

11. (previously presented) The method of claim 9, wherein identifying action steps comprises:

      determining if action is required;

identifying the action to correct the problem; and

determining if the action is automatically performed by a management server.

12. (original) The method of claim 11, further comprising, if the action is automatic, initiating the action.

13. (previously presented) A message-based system for managing a storage area network (SAN), comprising:

a management server that monitors states of devices coupled to the SAN and sends alert messages based on the states;

a message processor that receives the alert messages and sends notification messages, the message processor comprising:

a receiver that receives the alert messages,

a parser that analyzes the received alert messages,

a formatter/addresser that formats and addresses the notification messages, and

a transmitter that sends the notification messages to messaging devices; and

an action rules database that specifies possible corrective actions for correcting a problem associated with the alert, wherein the parser consults the database to select one or more of the corrective actions.

14. (previously presented) The system of claim 13, wherein the parser consults the database and uses a state of a device to determine action options.

15. (previously presented) The system of claim 13, wherein the possible corrective actions include actions to be initiated automatically by the message processor.

16. (previously presented) The system of claim 13, wherein the possible corrective actions include action options requiring approval of a system administrator receiving a notification message, and wherein the notification message includes the action options.

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17. (original) The system of claim 13, wherein the formatter/addresser formats the alert messages for receipt by one or more of a Web browser, a mobile phone, and a telephone.

18. (original) The system of claim 13, wherein the management server initiates automatic corrective action based on a monitored state of a device, and wherein a notification message indicates the action taken by the management server.

19. (original) The system of claim 13, wherein the alert messages are e-mail messages.

20. (original) The system of claim 13, further comprising a lightweight directory access protocol (LDAP) database that specifies recipients of the alert messages and transmission modes and addresses.

21. (previously presented) A compute readable medium having instructions for causing a computer to execute a method, comprising:

receiving an alert related to a state of a device coupled to a storage area network (SAN);

parsing the alert to identify the state of the device, comprising:

determining a problem category, and

determining action options, comprising consulting an action rules database;

identifying an action required to correct a problem associated with the alert in response to the identified state of the device;

identifying a notification message, wherein the notification message provides information related to the state of the device; and

performing one of (1) automatically performing the action to correct the problem without approval from an operator of the SAN and (2) notifying the operator to perform the action to correct the problem.

22. (previously presented) The computer readable medium of claim 21, the steps further comprising identifying an operator of the SAN to receive the notification message.

23. (previously presented) The computer readable medium of claim 21, the steps further comprising sending the notification message to the operator.

24. (previously presented) The computer readable medium of claim 23, the steps further comprising:

waiting on a response message from the operator, wherein the response message directs performance of one or more action steps; and

directing execution of the action steps.

25. (previously presented) The computer readable medium of claim 24, wherein the information in the notification message includes one or more suggested action steps for execution.

26. (previously presented) The computer readable medium of claim 21, the steps further comprising directing performance of one or more automatic action steps.

27. (previously presented) The computer readable medium of claim 21, wherein the information includes a report of automatic action steps completed.

28. (previously presented) A message-based system for managing a storage area network (SAN), comprising:

means for monitoring states of devices coupled to the SAN;

means for sending alert messages based on the states;

means for receiving the alert messages and sending notification messages;

means for identifying actions to correct problems associated with the alert messages;

means for automatically performing the actions to correct the problems when an operator is not required to make a decision for correcting the problems; and

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means for sending the actions to correct the problems to the operator when the operator is required to make a decision for correcting the problems.

29. (previously presented) The system of claim 28, wherein the means for automatically performing the actions to correct the problems uses a state of a device to determine action options.

30. (previously presented) The system of claim 29, wherein the means for automatically performing the actions to correct the problems is a management server.

31. (previously presented) The system of claim 29, further comprising means to evaluate plural suggestive actions to correct the problems in order to select a corrective action.

32. (previously presented) The system of claim 28, further comprising means for formatting-the alert messages for receipt by one or more of a Web browser, a mobile phone, and a telephone.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.